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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Application Number: 10/628,652

Filing Date: July 28, 2003

Appellant(s): KASPER ET AL.

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Mr. William Gehris  
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6-7-2007 appealing from the Office action mailed 12-4-2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after the Office action dated 12-4-2006 contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

3,585,932	GRANGER	6-1971
5,003,875	SHRIVER	4-1991
6,450,097	KRISLER ET AL	9-2002
3,664261	DAHLGREN	5-1972

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Granger(3,585,932).

The patent to Granger teaches the structure of a fluid delivery device for a printing machine as claimed including a rotating roller 14 having a roller surface for carrying a fluid film it picked up from an ink supply container 36, a metering element 61(ink control blade) having an edge for splitting the fluid film and a first concave surface 62 facing the roller surface, the metering element being movable with respect to the roller surface. Granger teaches the ink control blade 61 that accurately controls the thickness and uniformity of the film of ink because the position of concave surface 62 in relation to the surface of the roller 14 can be accurately adjusted by the provided structure. See Figs. 1 and 2, the abstract, column 3, lines 14-39, and claim 1 in Granger for details. Since Granger teaches the exact structural arrangement of a fluid delivery device for a printing machine as recited, the fluid delivery device of Granger is well capable of achieving the recited functional outcome as recited, wherein a thickness of the fluid film downstream from the metering element is half of an average distance of the concave surface from the roller surface. With respect to claim 21, Granger shows an ink supply container 36, the

roller surface 14 contacting the fluid supply container and the fluid film before splitting exiting the supply container as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 12-14, 20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shriver(5,003,875) in view of Granger(3,585,932). The patent to Shriver teaches the method and apparatus of a fluid delivery device for a printing machine as claimed including a rotating roller 32, a fluid supply container 26 for supplying a fluid film to the rotating roller surface, a metering element 150 having an edge for splitting the fluid film and a first surface facing the roller surface, and an adjustment mechanism 176-180 for moving the metering element 150 relative to the roller surface along a radial line from a center of the rotating roller. See Fig. 6 and the paragraph bridging columns 3 and 4 in Shriver for details. However, Shriver does not teach the first surface of the metering element 150 to be a concave surface. The patent to Granger teaches a fluid delivery device for a printing machine including a metering element 61 that has a concave surface 62 facing the rotating roller surface 14 and the curvature of the concave surface 62 has the same or very nearly the same radius as the roller 14. See Fig. 2, the abstract and column 4, lines 14-39 in Granger for example. It would have been obvious to those having ordinary skill in the art to provide the metering element of Shriver with the concave surface appropriately disposed as taught by Granger so as to accurately set the position of the concave surface with respect to rotating roller surface in order to accurately control the thickness

and uniformity of the film of ink. Regarding claims 2 and 14, the metering element 150 of Shriver shows a second concave surface opposite the first surface as recited. With respect to claim 6, the metering element 150 of Shriver has a horizontal bottom surface as recited.

With respect to claim 4, the combination of Shriver and Granger teaches all that is claimed except that it does not specifically state that the concave surface being an arc of 10 degrees(out of a total of 360 degrees for the roller's circumferential surface) or more of the roller surface as recited, even though the concave surface of the ink control blade 61 in Figs. 1 and 2 of Granger appears to be an arc of 10 degrees or more of the roller surface as recited. Since Granger teaches the use of a concave surface 62 for the ink control blade 61 adjustably positioned relative to the roller surface in order to accurately control the thickness and uniformity of the ink film on the roller surface, the length of such a concave surface with respect to the length of the roller surface would have been determined by those having ordinary skill in the art through routine experimentations in order to achieve the ideal ink film thickness and uniformity on the roller surface. Such a determination through routine experimentations would have been obvious to those ordinary skill in the art. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

With respect to claim 23, see the discussion regarding claim 21 above.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shriver in view of Granger as applied to claim 1 above, and further in view of Dahlgren((3,664,261). Shriver, as modified by Granger, teaches all that is claimed except for the metering element being rigid. Dahlgren teaches in a fluid delivery device the conventionality of using a rigid doctor blade(same as the metering element). See column 5, lines 13-18 in Dahlgren for example. It would have been obvious to those having ordinary skill in the art to provide the fluid delivery device of Shriver, as modified by Granger, with a rigid metering element as taught by Dahlgren so as to achieve a controlled, uniform rate of fluid delivery as demanded by the printing layout.

Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Granger(3,585,932). The patent to Granger teaches the structure of a fluid delivery device for a printing machine as claimed including a rotating roller 14 having a roller surface for carrying a fluid film it picked up from an ink supply container 36, a metering element 61(ink control blade) having an edge for splitting the fluid film and a first concave surface 62 facing the roller surface, the metering element being movable with respect to the roller surface. Granger teaches the ink control blade 61 that accurately controls the thickness and uniformity of the film of ink because the position of concave surface 62 in relation to the surface of the roller 14 can be accurately adjusted by the provided structure. See Figs. 1 and 2, the abstract, column 3, lines 14-39, and claim 1 in Granger for details. Granger does not specifically state that the concave surface being an arc of 10 degrees(out of a total of 360 degrees for the roller's circumferential surface) or more of the roller surface as recited, even though the concave surface of the ink control blade 61 in Figs. 1 and 2 of Granger appears to be an arc of 10 degrees or more of the roller surface as recited. Since Granger teaches the use of a concave surface 62 for the ink control blade 61

adjustably positioned relative to the roller surface in order to accurately control the thickness and uniformity of the ink film on the roller surface, the size of such a concave surface with respect to the size of the roller surface would have been determined by those having ordinary skill in the art through routine experimentations in order to achieve the ideal ink film thickness and uniformity on the roller surface. Such a determination through routine experimentations would have been obvious to those ordinary skill in the art. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. With respect to claim 22, see the discussion regarding claim 21 above.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shriver in view of Granger as applied to claim 1 above, and further in view of Kistler et al(6,450,097). Shriver, as modified by Granger teaches all that is claimed except for the use of a reducer roll interacting with the rotating roller. Kistler et al teach in a fluid delivery device for a printing machine including a rotating roller 5 for carrying a fluid film on its surface, a metering element 4 having an edge for splitting the fluid film and being movable with respect to the roller surface, and a reducer roll 9 interacting with the rotating roller 5. See Fig. 1 in Kistler et al for example. It would have been obvious to those having ordinary skill in the art to provide the fluid delivery device of Shriver, as modified by Granger with the reducer roll appropriately disposed as taught

by Kistler et al in order to further regulate the amount of fluid carried by the rotating roller to be transferred to the downstream printing cylinders.

**(10) Response to Argument**

With respect to the rejection under 35 USC 102(b) against claims 17 and 21, Appellants argued with respect only to independent claim 17 that Granger fails to specify the limitation of half an average distance downstream and the Office action cites to no disclosure in Granger meeting the limitation “wherein a thickness of the fluid film downstream from the metering element is half of an average distance of the concave surface from the roller surface. This argument is not persuasive because Appellants appear to have overlooked the fact that Granger teaches the exact structure of a fluid delivery device as recited in claims 17 and 21 and such a fluid delivery device is well capable of achieving the same functional outcome of obtaining a thickness of the ink film downstream from the metering element 61 at half of an average distance of the concave surface 62 from the roller surface. Paragraph [0029] of the present specification discloses “when the ink film exists metering element 20, the velocity profile across the entire ink film becomes more uniform, and approximately the surface speed of the roller 14. Thus in theory the thickness of the ink film downstream from the metering element 20 reduces to half the distance D. However, based on other factors such as edge pressure, air resistance and gravity, the thickness of the fluid film down stream of the concave surface may vary from half. Half as defined herein thus includes these minor variations from a true half.” Since the fluid delivery device as taught by Granger has the exact structural arrangement as presently disclosed and claimed, the same theory applies to the thickness of the ink film downstream from the metering element 61 which should reduce to half the distance between the concave surface 62 and the

roller surface, considering all the other factors such as edge pressure, air resistance and gravity that the fluid delivery device of Granger would inherently encounter as well. Appellants further argued with respect to claim 17 that Granger does not achieve the limitation of “half an average distance” as referred to above since the reservoir 38 and cells 25 result in a different velocity profile than the present invention. This argument is also not persuasive because the claimed invention does not structurally differentiate from the structure of the fluid delivery device as taught by Granger. There is no structural difference between the claimed fluid delivery device and the fluid delivery device of Granger. Hence, the fluid delivery device of Granger is capable of functioning at the same velocity profile as in the Appellants’ claimed invention. With respect to claim 21, since Appellants did not separately argue the patentability of claim 21, it stands or falls with claim 17.

With respect to the 35 USC 103 rejection against claims 1-4, 6-9, 12-14, 20 and 23, Appellants argued with respect only to claim 1 that Shriver does not have a first concave surface on the metering blade 150 and Granger has a concave surface on the metering blade, but is only to retain pressure in the reservoir. The curved section of Granger permits the reservoir to be properly sealed, not to provide any film splitting capabilities. The Examiner respectfully disagrees. Granger clearly teaches the ink control blade 61 with the concave surface that accurately controls the thickness and uniformity of the film of ink (see Abstract of Granger). The ink control blade 61 of Granger also clearly functions to split the ink film by reducing the thickness of the ink film from upstream of the concave surface 62 to the desired thickness of the ink film downstream of the concave surface 62. Thus, one of ordinary skill in the art, when presented with the teachings of Shriver and Granger, would be motivated to provide the ink

metering blade 150 of Shriver with a concave surface facing the roller surface as taught by Granger in order to accurately control the thickness and uniformity of the film of ink downstream of the metering blade so as to improve printing quality. Appellants further argued that since the metering blade 150 of Shriver is not in contact with the reservoir, and no sealing is needed, one of skill in the art would not have looked to the curvature of Granger to alter metering element 150 of Shriver. This argument is not persuasive because Appellants appear to argue against the references individually. In response to Appellants' argument against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the present case, since both the blade 150 of Shriver and the blade 61 of Granger are fluid metering elements, one of ordinary skill in the art would have looked to the curvature of the Granger in an effort to more accurately control the thickness and uniformity of the film of ink downstream of the metering blade in the fluid delivery device of Shriver. The Examiner also disagrees with Appellants' statement that there is no teaching in Granger or Shriver at all that the curved surface improves the accuracy of the "position of the concave surface" as asserted in the office action. The office action above does not state that the curved surface improves the accuracy of the "position of the concave surface" as alleged. Rather, the rational to apply the teaching of Granger to use a curved surface for the metering blade is to accurately set the position of the concave surface with respect to rotating roller surface in order to accurately control the thickness and uniformity of the film of ink. Such rational can be readily seen in Granger in the Abstract and column 3, lines 33-39. Appellants additionally argued that the

inker of Granger and can decorating apparatus of Shriver are completely different types of inking devices, as anilox inkers use cell based structure(which is why Granger has a pressurized reservoir). This argument is also not persuasive because there is nothing in the present claims that differentiate the inking device of the present invention from the other types of inking devices of the prior art. Appellants appear to again attack the references separately. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the present case, since both the blade 150 of Shriver and the blade 61 of Granger are fluid metering elements, one of ordinary skill in the art would be motivated to apply the curved surface of the metering blade taught by Granger in an effort to more accurately control the thickness and uniformity of the film of ink downstream of the metering blade in the fluid delivery device of Shriver.

Since Appellants only provided arguments regarding claim 1, the remaining claims in this grouping should stand or fall with claim 1.

In response to the argument regarding claim 9, since claim 9 recites the same limitation of a thickness of the fluid film downstream from the metering element is half of an average distance of the concave surface from the roller surface as recited in claim 17, see Examiner's statements regarding claim 17 above.

With respect to the rejection under 35 USC 103 against claim 5, Appellants argued that there is no motivation to modify Shriver and Granger in view of Dahlgren as Dahlgren is a sheet fed offset printing press. The rational of this argument is not understood. Dahlgren teaches in a

printing press the use a rigid metering element to achieve a controlled, uniform rate of fluid delivery as demanded by the printing layout. Thus, it is believed the teaching of Dahlgren provides the proper motivation to those skilled in the printing art to provide the metering element of Shriver, as modified by Granger with a rigid material in order to achieve the stated advantage.

With respect to the rejection under 35 USC 103 against claims 16 and 22, Appellant argued with respect only to claim 16 that Granger does not show a metering element for “splitting a fluid film” as claimed as there is no film split by Granger and Granger does not disclose that the roller surface carries a fluid film. This argument is again not persuasive. Granger clearly teaches in the Abstract and claim 1 that the inking cylinder 14 picks up an ink film on its surface from the ink fountain 36 and the ink control blade 61 functions to accurately control the thickness and uniformity of the ink film on the cylinder surface by reducing the ink film(same as splitting the ink film) from the thickness upstream of the concave surface 62 to the desired thickness downstream of the concave surface 62. Accordingly, it is believed Granger does show a metering element(ink control blade 61) for “splitting a fluid film” and does disclose that the roller surface carries a fluid film as claimed.

Appellants further argued with respect to claim 16 that Granger fails to disclose the “arc of 10 degrees or more of the roller surface”. The Examiner again disagrees. Granger does not specifically state that the concave surface 62 being an arc of 10 degrees(out of a total of 360 degrees for the roller’s circumferential surface) or more of the roller surface as recited, even though the concave surface of the ink control blade 61 in Figs. 1 and 2 of Granger appears to be an arc of 10 degrees or more of the roller surface as recited. Since Granger teaches the use of a concave surface 62 for the ink control blade 61 adjustably positioned relative to the roller surface

in order to accurately control the thickness and uniformity of the ink film on the roller surface, the size of such a concave surface with respect to the size of the roller surface would have been determined by those having ordinary skill in the art through routine experimentations in order to achieve the ideal ink film thickness and uniformity on the roller surface. Such a determination through routine experimentations would have been obvious to those ordinary skill in the art. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

With respect to claim 22, since Appellants did not separately argue the patentability of claim 22, it stands or falls with claim 16.

With respect to Appellants' argument regarding claim 18, since claim 18 is a dependent claim of claim 1, the Examiner's statement above with respect to Appellants' argument regarding claim 1 applies here as well. Appellants further argued that there is no motivation to combine Shriver, Granger and Kistler but did not provide any reasoning. It is again the position of the Examiner that those having ordinary skill in the art would be motivated to provide the fluid delivery device of Shriver, as modified by Granger with the reducer roll appropriately disposed as taught by Kistler et al in order to further regulate the amount of fluid carried by the rotating roller to be transferred to the downstream printing cylinders.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Ren Yan/  
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Primary Examiner  
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Conferees:

  
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